

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 86-31

WASTE DISCHARGE REQUIREMENTS FOR:

MICREL, INC.;
LITRONIX, INC.;
PASTORIA LIMITED PARTNERSHIP;
SUNNYVALE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. Micrel, Inc. purchased the assets of the business located at 639 Pastoria Avenue in Sunnyvale, California, from Litronix, Inc., then a subsidiary of Siemens Corporation, in November, 1981. The property itself is owned by Pastoria Limited Partnership. Micrel, Inc., as the current tenant of the facility involved in the handling of some of the contaminants found at the site, Litronix, Inc. (now a wholly owned subsidiary of Siemens Capital Corporation), as a former tenant involved in the handling of contaminants found at the site, and the Pastoria Limited Partnership, as the current land-owner, are hereinafter referred to as the dischargers for the purposes of this Order. The facility at the site has been used for the manufacture of semiconductors since 1971. The site history is as follows:
 - a. 1970-72: construction and operation of the original facility by Phil Shiota and Bob Zinn in 1970 under the name Advanced LSI.
 - b. 1972: Litronix, Inc. purchased the assets of Advanced LSI.
 - c. 1972-1977: Litronix, Inc. continued operating the facility through its subsidiary, Advanced LSI Technology, Inc.
 - d. 1977: Siemens Corporation purchased the stock of Litronix, Inc.

- e. 1977 - November 12, 1981: Litronix, Inc., then a subsidiary of Siemens Corporation, continued operating the facility through its subsidiary, Advanced LSI Technology, Inc.
 - f. November 13, 1981 - present: Micrel Inc. purchased the assets of the business from Advanced LSI Technology, Inc., then a subsidiary of Litronix, Inc., and obtained a new lease of the building.
 - g. Siemens Corporation has reorganized and Litronix, Inc. is now a wholly owned subsidiary of Siemens Capital Corporation. Advanced LSI Technology, Inc. is no longer in existence.
- 2. In the fabrication of semiconductors at this facility, organic solvents and various acids are used for cleaning and etching the surface of silicon wafers. To facilitate the handling of waste solvents, an iron, 500-gallon underground solvent-waste storage tank was installed at the facility by 1977. The tank was replaced with a similar one in 1979. The tank was cleaned and emptied of all its contents in April, 1984, and was excavated for offsite disposal in May, 1985. It is believed that one or both of the tanks and/or the related piping have acted as the principal sources of subsurface pollution at the site.
 - 3. Site investigations have found the soil and groundwater at the site to be contaminated with organic solvents including trichloroethylene, trichloroethane, tetrachloroethylene, dichloroethane, xylene, phenol, toluene, trichlorobenzene, and n-butyl acetate. Concentrations of solvents in the soils have been found at percentage values, and in the groundwater at levels of several parts per million. This pollution poses a threat to the beneficial uses of water of the state.
 - 4. Both the vertical and lateral extent of groundwater pollution at this site have not yet been defined. Therefore, further studies and monitoring are required to define the extent of pollution and the degree of threat to beneficial uses of the affected water resources. These studies should lead to the development and implementation of a final containment and cleanup strategy which should address the entire plume.

5. The Board, on September 18, 1985, adopted Order No. 85-112 for the site. This Order required pollutant definition, and the development of plans for pollutant plume containment. This Order named Micrel, Inc., and Pastoria Limited Partnership, as dischargers, but the Order included a Finding indicating the Board's intent to amend the Order at a later date to include Siemens and/or any other responsible party.
6. Micrel, Inc. and Litronix, Inc. have requested that their responsibility under this Order be limited to those chemicals which each respective discharger released. Both Micrel, Inc. and Litronix, Inc., utilized non-chlorinated solvents and trichlorobenzenes, whereas only Litronix, Inc. utilized trichloroethylene. It is the intent of this Order to hold the named dischargers responsible only to the extent that they caused the pollution described herein.

Due to commingling of the plumes, and the potential adverse effects and interferences that could result from uncoordinated cleanup plans, this Order requires that the responsible parties define the extent of and develop an interim remedial action plan for the entire pollutant plume. This allows for joint or independent investigation and/or cleanup by the respective responsible parties, provided such investigation and/or cleanup is sufficiently coordinated to address the total pollutant plume.

The Board has included Micrel, Inc. as a discharger in the Order since Micrel, Inc. may share responsibility for the release of a portion of the chemicals found at the site, and they are the current tenants of the facility and their cooperation will be necessary to assure compliance with this Order.

7. By letter dated February 21, 1986, Litronix, Inc., a wholly owned subsidiary of Siemens Capital Corporation, has offered to assume full responsibility for future investigation and remediation of chemicals of concern emanating from the 639 Pastoria Avenue facility. It is the intent of the Board to work cooperatively with all dischargers according to the contents of this letter.

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By letter dated March 12, 1986, Siemens Capital Corporation has pledged to honor the obligations of its subsidiary, Litronix, Inc., with regard to the waste discharge requirements. Siemens has provided a Corporate Guaranty dated April 16, 1986, to provide financial assurance that Litronix's obligations are fulfilled. This guaranty is appended to this Order as Attachment (1).

If Litronix fails to fulfill its responsibilities as set forth in this Order and Siemens fails to assure that this Order is complied with in a timely manner the Board will asmend this Order and/or take enforcement action to include Siemens Capital Corporation as a responsible party.

8. The Board adopted a revised Water Quality Control Plan, (Basin Plan), for the San Francisco Bay Region on July 21, 1982. The Basin Plan contains water quality objectives for San Francisco Bay. The Basin Plan also contains water quality objectives for groundwater. The objectives include the maintenance of water quality and existing beneficial uses of these water resources.
9. The existing and potential beneficial uses of the groundwater underlying the facility include:
 - a. Industrial process water supply
 - b. Industrial service supply
 - c. Domestic supply
 - d. Agricultural supply
10. The Board has notified the dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and opportunity to submit their written views and recommendations.
11. This project constitutes a minor modification to land and as such is exempt from the provisions of the California Environmental Quality Act, (CEQA), in accordance with Section 15304 of the Resources Agency Guidelines.
12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers, in order to meet the provisions in Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the state is prohibited.
2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup, which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The treatment or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The vertical and lateral extent of pollution shall be defined. Should monitoring results show evidence of plume migration, additional plume characterization shall be required.
3. The hydrogeologic conditions in all polluted aquifers and related areas shall be defined.

C. PROVISIONS

1. The dischargers shall file an NPDES Permit application if a discharge of extracted groundwater is proposed to waters of the State.
2. The dischargers shall comply with Prohibition A.3, and Specifications B.2 and B.3 above, in accordance with the following tasks and time schedule:

<u>Task</u>	<u>Completion Date</u>
Submit a technical report defining the lateral and vertical extent of the groundwater pollution onsite.	June 2, 1986

b. Submit a technical report November 3, 1986
defining the lateral and
vertical extent of the
offsite groundwater
pollution emanating from
the site.

3. The dischargers shall comply with Prohibitions A.1, A.2, and A.3, and Specification B.1 in accordance with the following tasks and time schedule:

<u>Task</u>	<u>Completion Date</u>
a. Submit a technical report which contains an interim remedial action plan for full containment and cleanup of the entire pollutant plume. This report shall include consideration of the removal and/or cleanup of polluted soils, and an implementation time schedule, if the plan includes such removal or cleanup. This report shall also include a completed NPDES application to discharge to surface waters, if such discharge is an element of the plan.	December 15, 1986
b. Commence operations of necessary hydraulic control and treatment facilities of adequate design to contain and clean up the entire pollutant plume.	May 1, 1987
c. Submit a technical report which evaluates the effectiveness of the hydraulic containment system. Such an evaluation shall include, but need not be limited to, an	September 1, 1987

estimation of the flow capture zones of the wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data, if extraction wells are proposed. This report shall also evaluate and document the removal and/or cleanup of polluted soils, if such removal and/or cleanup is an element of the remedial action plan. Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and cleaning up the pollutant plume.

4. Quarterly technical reports on compliance with the Provisions of this Order shall be submitted to the Board commencing on June 2, 1986. These reports shall include, but need not be limited to, updated water table and piezometric surface contour maps, pollution concentration contour maps for all affected water bearing zones, cross-sectional geological maps describing the hydrogeologic setting of the site, and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures. All hydrogeological plans, specifications, reports, and documents shall be signed and/or stamped with the seal of a registered geologist, engineering geologist, or professional engineer.

5. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies and other dischargers:
 - a. Santa Clara Valley Water District
 - b. Santa Clara County Health Department
 - c. City of Sunnyvale
 - d. State Department of Health Services/TSCD
 - e. Litronix, Inc.
 - f. Micrel, Inc.
 - g. Pastoria Limited Partnership
6. In the event of non-compliance with Provisions C.1, C.2, C.3, C.4, and C.5 of this Order, the dischargers shall submit written notification to the Regional Board office within two weeks which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on compliance with the remaining requirements of this Order.
7. All samples shall be analyzed by laboratories using approved EPA methods for the type of analyses to be performed. All laboratories shall maintain quality assurance/control records for Board review.
8. If Litronix, Inc. fails to fulfill its responsibilities under this Order and Siemens Capital Corporation fails to assure that this Order is complied with in a timely manner, the Executive Officer is directed to refer enforcement of the Guaranty set forth in Finding 7 to the Attorney General and to commence other appropriate enforcement action against Siemens Capital Corporation.
9. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

- a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or methodology implemented in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
10. The dischargers shall file a report on any significant changes in the nature, quantity, or transport of polluted groundwater, or site occupancy and ownership associated with the facility described in this Order.
 11. The dischargers shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
 12. Regional Board Order No. 85-112 is no longer applicable and is hereby rescinded.
 13. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on April 16, 1986.


ROGER B. JAMES
Executive Officer

Attachment: Siemens Capital Corporation
Corporate Guarantee, dated April 16, 1986

GUARANTY OF SIEMENS CAPITAL CORPORATION TO THE CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION

To Whom It May Concern:

We, the undersigned, Frank S. Hewitt, Secretary, and Jochen Hesse, Vice President and Treasurer, of SIEMENS CAPITAL CORPORATION, a Delaware corporation maintaining its principal place of business at 767 Fifth Avenue, New York, New York, do hereby certify that SIEMENS CAPITAL CORPORATION guarantees to the California Regional Water Quality Control Board, San Francisco Bay Region the performance and completion of all provisions of the Waste Discharge Requirements issued by said Board to LITRONIX, INC., a California corporation, with regard to the investigation and remediation of chemicals of concern emanating from 639 North Pastoria Avenue, Sunnyvale, California, and further guarantees the payment of all obligations incurred by LITRONIX, INC. pursuant thereto.

This Guaranty of SIEMENS CAPITAL CORPORATION is made in consideration of SIEMENS CAPITAL CORPORATION not being named by the California Regional Water Quality Control Board, San Francisco Bay Region as a Discharger in said Waste Discharge Requirements.

SIEMENS CAPITAL CORPORATION waives its right to be exonerated pursuant to California Civil Code Section 2845, and its right to be exonerated pursuant to California Civil Code Section 2819, unless said Waste Discharge Requirements are modified by the California Regional Water Quality Control Board, San Francisco Bay Region.

This GUARANTY shall continue in full force and effect until thirty days after all provisions of said Waste Discharge Requirements have been performed and completed.

We further certify that by unanimous consent of all Directors of SIEMENS CAPITAL CORPORATION, pursuant to the By-Laws of said Corporation, as of April 16th, 1986 the following resolution was duly adopted and that the same is still in full force and effect, not having been subsequently amended, modified or rescinded:

"RESOLVED, that the appropriate officer of SIEMENS CAPITAL CORPORATION is authorized and directed to execute and deliver a GUARANTY wherein SIEMENS CAPITAL CORPORATION guarantees to the California Regional Water Quality Control Board, San Francisco Bay Region the performance and completion of all provisions of the Waste Discharge Requirements issued by the California Regional Water Quality Control Board, San Francisco Bay Region to LITRONIX, INC., a California corporation, with regard to the investigation and remediation of chemicals of concern emanating from 639 North Pastoria Avenue, Sunnyvale, California, and further guarantees the payment of all obligations incurred by LITRONIX, INC. pursuant thereto. This Guaranty of SIEMENS CAPITAL CORPORATION is made in consideration of SIEMENS CAPITAL CORPORATION not being named by the California Regional Water Quality Control Board, San Francisco Bay Region as a Discharger in said Waste Discharge Requirements. SIEMENS CAPITAL CORPORATION waives its right to be exonerated pursuant to California Civil Code Section 2845, and its right to be exonerated pursuant to California Civil Code Section 2819, unless said Waste Discharge Requirements are modified by the California Regional Water Quality Control Board, San Francisco Bay Region. The execution of said GUARANTY is consistent with the Certificate of Incorporation and By-Laws of this Corporation."

IN WITNESS WHEREOF, we have hereunto affixed our hands and the seal of this Corporation as of this 16th day of April 1986.

SIEMENS CAPITAL CORPORATION

By

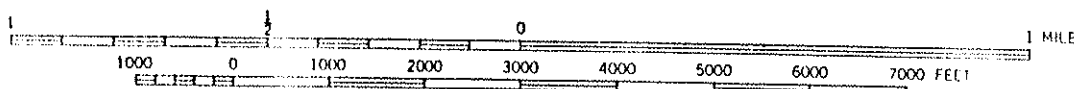
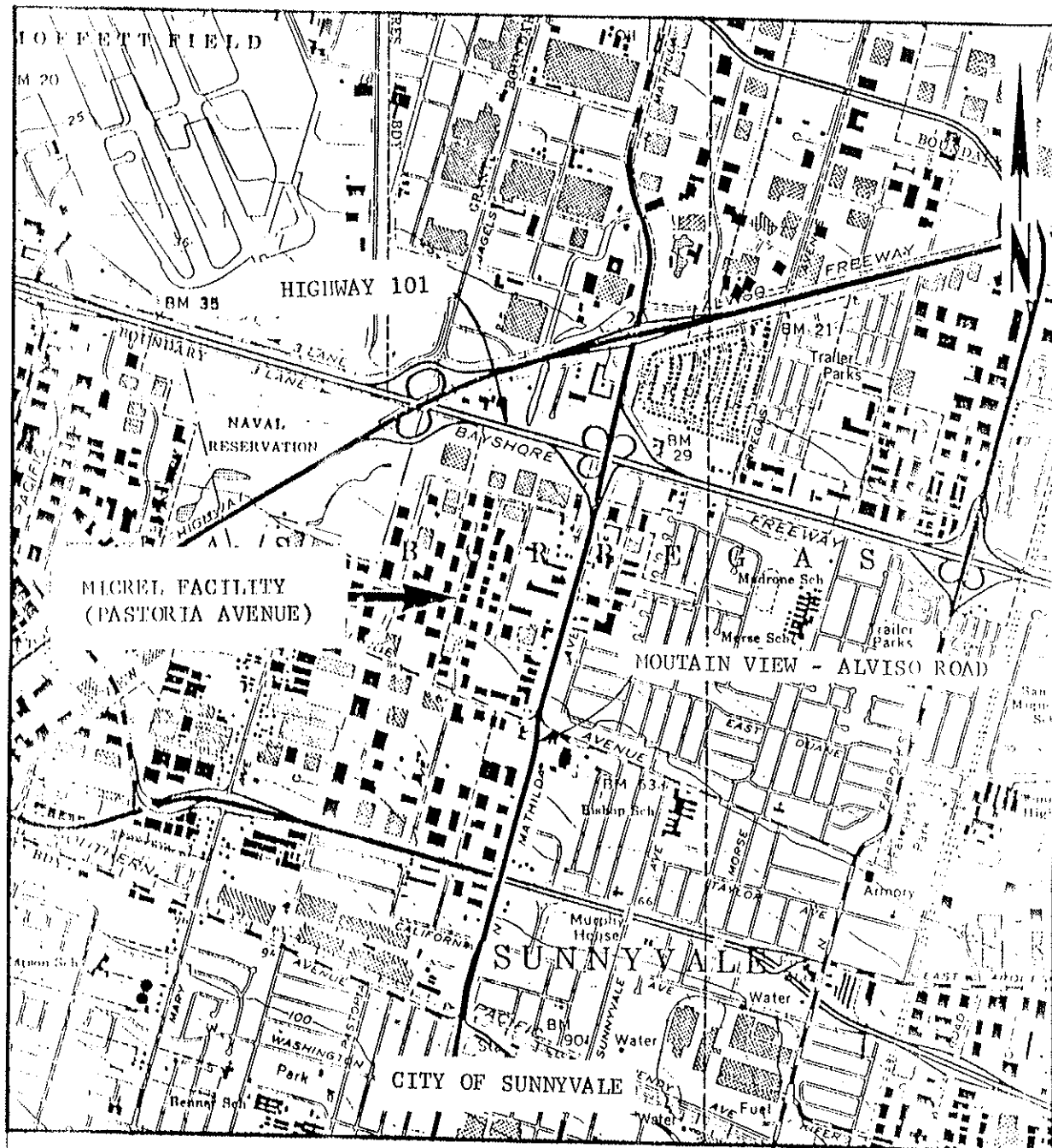
Frank S. Hewitt
Frank S. Hewitt

Secretary

By

Jochen Hesse
Jochen Hesse

Vice President and Treasurer



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

MICREL, INC.
LOCATION MAP

DRAWN BY:

DATE:

DRWG. NO.